

Claims

What is claimed is:

1. A distal protection filter assembly, comprising:
an adaptor having a proximal end, a distal end, and a lumen extending therethrough, the adaptor including a holding receptacle;
a distal protection filter having a plurality of struts; and
wherein the struts are coupled to the holding receptacle.
2. The assembly in accordance with claim 1, further comprising a guidewire disposed within the lumen of the adaptor, the guidewire coupled to the adaptor.
3. The assembly in accordance with claim 1, wherein the adaptor is slidably disposed on a guidewire.
4. The assembly in accordance with claim 1, further comprising a seal tube disposed within the lumen of the adaptor, the seal having a proximal end, a distal end, and a lumen extending therethrough.
5. The assembly in accordance with claim 4, wherein the distal end of the seal tube extends beyond the distal end of the adaptor.

6. The assembly in accordance with claim 4, further comprising one or more bearings disposed proximate the seal tube and the holding receptacle, the bearings adapted and configured to permit rotation of the seal tube relative to the adaptor

7. The assembly in accordance with claim 1, wherein the adaptor is rotatably coupled to a guidewire.

8. The assembly in accordance with claim 1, wherein the struts have flared proximal ends.

9. The assembly in accordance with claim 1, further comprising a cap, wherein the struts are coupled to the holding receptacle between the cap and the holding receptacle.

10. A method of coupling a distal protection filter to a guidewire, comprising the steps of:

providing a guidewire;

providing a tubular adaptor having a proximal end, a distal end, a lumen extending therethrough, and a cap slidably disposed thereabout, wherein the distal end includes a holding receptacle;

disposing the guidewire within the lumen,

coupling the tubular adaptor to the guidewire;

providing a distal protection filter having a plurality of struts;

coupling the struts to the holding receptacle; and
sliding the cap over the struts.

11. The method in accordance with claim 10, wherein the tubular adaptor further comprises a seal tube and wherein the step of disposing the guidewire within the lumen includes disposing the guidewire within a lumen of the seal tube.

12. The method in accordance with claim 10, wherein the step of coupling the tubular adaptor to the guidewire includes soldering the tubular adaptor to the guidewire.

13. The method in accordance with claim 10, wherein the step of coupling the tubular adaptor to the guidewire includes crimping the tubular adaptor onto the guidewire.

14. The method in accordance with claim 10, wherein the step of coupling the tubular adaptor to the guidewire includes adhesively bonding the adaptor to the guidewire.

15. The method in accordance with claim 10, wherein the step of coupling the tubular adaptor to the guidewire includes thermal bonding the adaptor to the guidewire.

16. The method in accordance with claim 10, wherein the holding receptor includes one or more grooves, and wherein the step of coupling the filter to the holding receptacle includes disposing the struts within the grooves.

17. The method in accordance with claim 10, wherein the struts have flared proximal ends, and wherein the step of coupling the filter to the holding receptacle includes disposing the flared proximal end proximal to the holding receptacle.

18. The method in accordance with claim 10, further comprising the step of fixedly coupling the cap to the tubular adaptor.

19. The method in accordance with claim 18, wherein the step of fixedly coupling the cap to the tubular adaptor includes adhesive bonding.

20. A method of coupling a distal protection filter to a guidewire, comprising the steps of:

providing an elongate shaft;

providing a mechanical attachment having a proximal end, a distal end, a lumen extending therethrough, and a cap slidably disposed thereabout, wherein the distal end includes a holding receptacle having one or more grooves;

disposing the shaft within the lumen,

coupling the mechanical attachment to the shaft;

providing a distal protection filter having a plurality of struts;

disposing the struts within the grooves; and
sliding the cap over the struts.

21. The method in accordance with claim 20, wherein the mechanical attachment further comprises a seal tube and wherein the step of disposing the shaft within the lumen includes disposing the shaft within a lumen of the seal tube.

22. The method in accordance with claim 20, wherein the step of coupling the mechanical attachment to the shaft includes soldering the mechanical attachment to the shaft.

23. The method in accordance with claim 20, wherein the step of coupling the mechanical attachment to the shaft includes crimping the mechanical attachment onto the shaft.

24. The method in accordance with claim 20, wherein the step of coupling the mechanical attachment to the shaft includes adhesively bonding the mechanical attachment to the shaft.

25. The method in accordance with claim 20, wherein the step of coupling the mechanical attachment to the shaft includes thermal bonding the mechanical attachment to the shaft.

26. The method in accordance with claim 20, wherein the struts have flared proximal ends, and wherein the step of coupling the filter to the holding receptacle includes disposing the flared proximal end proximal to the holding receptacle.

27. The method in accordance with claim 20, further comprising the step of fixedly coupling the cap to the mechanical attachment.

28. The method in accordance with claim 27, wherein the step of fixedly coupling the cap to the tubular adaptor includes adhesive bonding.

29. A distal protection filter assembly, comprising:

- an adaptor having a proximal end, a distal end, and a lumen extending therethrough;
- a seal tube disposed within the lumen of the adaptor;
- wherein the distal end of the adaptor includes a holding receptacle;
- one or more bearings disposed between the seal tube and the holding receptacle, the bearings adapted and configured to permit rotation of the seal tube relative to the adaptor;
- a cap disposed about the holding receptacle;
- a distal protection filter having a plurality of struts, the struts being coupled to the holding receptacle.